

CLAIMS

1. A method of producing a liquid container closure comprising the acts of
5 providing a cap having an interior surface defining an interior region, an exterior surface lying outside the interior region, and at least one hole extending from the interior surface to the exterior surface and
moving a plastics material through the at least one hole to create a monolithic compliant member having a cap liner located on the interior surface of the
10 cap and adapted to mate with a neck of a beverage container received in the interior region of the cap and a grip portion on the exterior surface of the cap.
2. The method of claim 1, wherein the moving act comprises applying the plastics material to the interior surface of the cap and then compressing the plastics material to form the cap liner in the interior region of the cap and form the
15 grip portion of the exterior surface on the cap.
3. The method of claim 2, wherein the applying act comprises extruding a plastics material onto the interior surface of the cap, determining the weight of the plastics material being extruded onto the interior surface of the cap, and ceasing the extruding step once the weight of plastics material extruded onto the
20 interior surface reaches a predetermined weight detected during the determining step.
4. The method of claim 2, wherein the cap includes a top wall and an annular skirt cooperating with the top wall to define the interior region and the plastics material is applied to a portion of the interior surface located on the top wall.
5. The method of claim 2, wherein the cap is formed at a first
25 station and the method further comprises, in series, transporting the cap from the first station to a second station, carrying out the applying step at the second station, transporting the cap and the plastics material on the interior surface of the cap to a third station, and carrying out the compressing step at the third station.
6. The method of claim 5, wherein the applying act comprises
30 extruding a plastics material onto the interior surface of the cap, determining the weight of the plastics material being extruded onto the interior surface of the cap, and

ceasing the extruding step once the weight of plastics material extruded onto the interior surface reaches a predetermined weight detected during the determining step.

7. A method of producing a liquid container closure comprising providing a cap having an interior surface defining an interior region and an exterior surface lying outside the interior region and compressing a plastics material located in the interior region to create a monolithic compliant member having a cap liner located on the interior surface of the cap and adapted to mate with a neck of a beverage container received in the interior region of the cap and a grip portion on the exterior surface of the cap.

8. The method of claim 7, wherein the compressing act includes the steps of moving a punch into the interior region of the cap to form the cap liner on the interior surface and to move plastics material through an opening formed in the cap and collecting plastics material moved through the opening to establish the grip portion on the exterior surface of the cap.

9. The method of claim 8, further comprising the step of applying the plastics material to the interior surface before the moving and collecting steps and wherein the applying step includes the steps of extruding a plastics material onto the interior surface of the cap, determining the weight of the plastics material being extruded onto the interior surface of the cap, and ceasing the extruding step once the weight of plastics material extruded onto the interior surface reaches a predetermined weight detected during the determining step.

10. The method of claim 9, wherein the cap includes a top wall and an annular skirt cooperating with the top wall to define the interior region and the plastics material is applied to a portion of the interior surface located on the top wall.

11. The method of claim 9, wherein the cap is formed at a first station and the method further comprises the steps of, in series, transporting the cap from the first station to a second station, carrying out the applying step at the second station, transporting the cap and the plastics material on the interior surface of the cap to a third station, and carrying out the moving step at the third station.

12. The method of claim 7, further comprising the step of applying the plastics material to the interior surface before the compressing step and wherein the applying step includes the steps of extruding a plastics material onto the interior

surface of the cap, determining the weight of the plastics material being extruded onto the interior surface of the cap, and ceasing the extruding step once the weight of plastics material extruded onto the interior surface reaches a predetermined weight detected during the determining step.